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PTO/SB/01 (6-95)

Approved for use through 06/30/96. OMB 0651-0032
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

DECLARATION FOR PATENT APPLICATION

Docket Number (Optional)

H0001160

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if Plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled
ENVIRONMENTAL AND THERMAL BARRIER COATING FOR CERAMIC COMPONENTS

Is attached hereto unless the following box is checked.

☐ was filed on _____ as United States Application Number or PCT International Application
Number _____ and was amended on _____ (If applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as Amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56.

I hereby claim foreign priority benefits under 35 U.S.C. § 119(a)-(d) or § 365(b) of any foreign application(s) for patent or inventor's certificate, or § 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s)

Priority Not Claimed

☐

(Number)

(Country)

(Day/Month/Year Filed)

I hereby claim the benefit under 35 U.S.C. § 119(e) of any United States provisional application(s) listed below.

60/278,102

March 23, 2001

(Application Number)

(Filing Date)

I hereby claim the benefit under 35 U.S.C. § 120 of any United States application(s), or § 365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the claims of this Application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. § 112, I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR § 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Number)

(Filing Date)

(Status — patented, pending, abandoned)

(Application Number)

(Filing Date)

(Status — patented, pending, abandoned)

I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith: Robert Desmond, Reg. No. 38,430, Larry Palguta, Reg. No. 29,575, Verne E. Kreger Jr., Reg. No. 35,231, Jeanne C. Suchodolski, Reg. No. 34,936, Roger H. Criss, Reg. No. 25,570 and William J. Zak, Jr., 38,668.

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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☐ Additional inventors are being named on separately numbered sheets attached hereto.

Lynn Griffin

LYNN GRIFFIN
NOTARY PUBLIC OF NEW JERSEY
Commission Expires 8/30/2004

Sworn to and subscribed
before me this
15 day of Nov. 2001

SECOND PAGE OF DECLARATION FOR PATENT APPLICATION

Docket No. H0001160

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11/15/2001

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Date:

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Residence:

Citizenship:

P.O. Address:

Inventor's Signature:

Date:

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Citizenship:

P.O. Address:

Inventor's Signature:

Date:

Name of Seventh Inventor:

Residence:

Citizenship:

P.O. Address:

- 1/18 - (C) FILE CA
STN CA Caesar accession number : 1464
AN - 136:394062 CA
TI - Reduction of leakage current of crystallized Ta₂O₅ through substituti.
with TiO₂
DT - Conference
IN - Salam, K. M. A.; Konishi, H.; Fukuda, H.; Nomura, S.
CS - Department of Electrical and Electronic Engineering, Muroran Institut
Technology, Faculty of Engineering, Hokkaido, 050-8585, Japan
SO - Extended Abstracts of International Workshop on Gate Insulator, 1st,
Tokyo, Japan, Nov. 1-2, 2001 (2001), 192-195 Publisher: Business Cent
for Academic Societies Japan, Tokyo, Japan.
CODEN: 69CNQY; ISBN: 4-89114-021-6
PY - 2001
AB - The influence of the addn. of TiO₂ into Ta₂O₅ thin fiims at
various compn. formed by metalorg. decompn. (MOD) was studied. The
effects of post-deposition rapid thermal annealing (RTA) temp. on the
structural and elec. properties of Ta₂O₅-xTiO₂ thin films were
also analyzed. B doped Czochralski grown, p-type (100) Si wafers wer
used as substrate materials. The (1-x)Ta₂O₅-xTiO₂ thin films
with a polycryst. structure were successfully prepd. by metalorg.deco
crystallinity and insulating properties. A cryst.beta-Ta₂O₅
phase was obtained and the surface morphol. of the films was
smooth. It increases the grain size with increase in annealing temp.
high dielec. const., low leakage current, low interface trap d., low l
good thermal stability, high charge storage d., and good breakdown
strength results of 0.92Ta₂O₅-0.08TiO₂ thin films are
encouraging for the possibility of dielec. layer in fully
integrated electronic devices.